In the Matter of	)	
	)	
	)	
The Wireless Emergency Alert System	)	PS Docket No. 07-287
	)	
	)	
47 C.F.R. § 10.350	)	

Dated: September 4, 2013

Madison County EMA/CSEPP
560 S. Keeneland Drive
Richmond, KY 40475

The County of Madison in the Commonwealth of Kentucky pursuant to Section 1.925 of the Commission's rules[1], hereby respectfully requests that the Federal Communications Commission ("Commission" or "FCC") grant a temporary waiver of 47 CFR §10.350, specifically the prohibiting of test messages from state and local alerting authorities and 47 CFR §11.45 to permit a test message with an emergency event code.

I. BACKGROUND

Madison County has specific needs in alerting the public of emergencies in a timely manner. Madison County is the host county of the Blue Grass Army Depot where chemical and traditional military ordinance is stored. In addition, the county has several

[1] 47 C.F.R. §1.925.

colleges and a major interstate highway. These cause the county to have a large transient population.

The advent of Wireless Emergency Alerts (WEA) gives emergency management an additional method to reach the public with critical alerts. WEA promises to extend the penetration of alerts. WEA allows emergency managers to reach a larger number of affected citizens, to include the transient public, within the danger area with the speed necessary to save the maximum number of lives.

The county uses several types of alert and notification systems. As with all emergency management functions, exercising or testing of these systems is a routine practice. For example, the Chemical Stockpile Emergency Preparedness Program (CSEPP) Program Guidance, dated December 2012, provides direction and key objectives to the CSEPP communities to protect the public. Chapter 11: Alert and Notification states:

> *For all implemented A&N systems, plans and procedures should provide for periodic testing, maintenance, and evaluation to support a continuing capability for alert and notification. All systems used for public alert and notification should receive preventive maintenance on a regular schedule and should be tested at least monthly.*

Regular testing with existing tools is a well-organized, well-coordinated, and accepted practice within the CSEPP communities. Testing validates that the tools are properly

configured, the operators are properly trained, and the public is well informed and educated about their role in emergency preparedness.

Madison County sees the ability to use the Integrated Public Alert and Warning System (IPAWS) to alert multiple systems at the same time as important to the mission of keeping the public safe. The County believes that there is a need to deploy this technology in the community.

II. SCOPE OF THE WAIVER REQUEST

This waiver is to allow Madison County to conduct a test of IPAWS and specifically the WEA system. The parties request that 47 CFR §10.350 and 47 CFR §11.45 be waived to allow these tests.

The test will be to send two messages using live event types, but having the text state that it is only a test. This test is scheduled to take place on December 18, 2013, from 11:00 AM to 3:00 PM local time. In the event of problems, an alternate date of December 19, 2013, at the same time has been selected. A copy of the draft test plan is attached to this request.

III. CONCLUSION

This new technology has great promise for providing timely alerts to those in greatest danger. It is imperative that Madison County have the ability to incorporate WEA into alerting plans, and an FCC waiver would get the process in motion. Madison County appreciates any assistance the FCC can provide in this matter.

For further information and waiver coordination, please contact me using the information below.

Respectfully submitted,

Carlis Richards, Director
Madison County EMA/CSEPP
560 S. Keeneland Drive
Richmond, KY 40475
859-624-4787

IPAWS

Test Plan

DRAFT v4

September 3, 2013

Table of Contents

1 Introduction

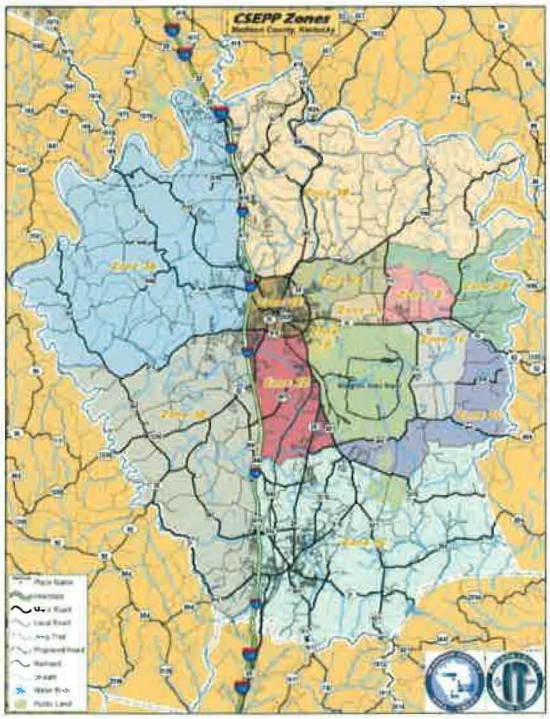
1.1 Overview

Madison County, Kentucky, is a county south of Lexington. The county has a land area of 420 square miles and a population of 85,416. The county is home to two universities and a college, as well as several industrial facilities. A major interstate highway goes through the county. This results in a large transient population.

The Blue Grass Army Depot (BGAD) is located in the center of Madison County and covers approximately 15,000 acres with 255 acres dedicated to the Chemical Stockpile Emergency Preparedness Program (CSEPP). BGAD contains 852 igloos, 45 of which are dedicated to chemical weapons. The igloos contain munitions with chemical agents manufactured prior to 1968. Since 1944, the Army has safely stored approximately 2 percent of the nation's original chemical weapons stockpile at BGAD. The installation is also used for the storage of conventional explosive munitions.

CSEPP was created in 1985 when the US Congress passed a law directing the Army to dispose of its aging chemical weapons inventory with maximum protection of the public and environment as its primary consideration. Since its inception, the primary goal of CSEPP has been to educate and enhance emergency preparedness in communities surrounding the chemical stockpile stored at BGAD.

Madison County has several zones identified for alerts and actions in the event of an emergency.



Madison County uses several warning and notification systems to warn the public of emergencies of all natures. These systems include:

- Warning sirens
- Alert radios in structures
- Emergency Alert System (EAS) – the County has a transmitter monitored by local broadcasters
- Emergency Telephone Notifications System

Madison County would like to add the Integrated Public Alert and Warning System (IPAWS) and specifically the Wireless Emergency Alerts (WEA) system to the available systems. Before full adoption of this new system, tests must be conducted to determine the most effective use of this system to alert the public.

This test plan was developed to test these systems against the needs of the county.

1.2 Goals and Objectives

Goal 1 – Validate equipment and configurations

Objective 1.1 – Validate Alert Authority's equipment can effectively handle audio
Objective 1.2 – Validate broadcaster's equipment can effectively handle audio
Objective 1.3 – Validate equipment can generate Commercial Mobile Alert System (CMAS) alerts

Goal 2 – Validate message templates

Objective 2.1 – Validate message template for EAS
Objective 2.3 – Validate message template for WEA

Goal 3 – Validate procedures

Objective 3.1 – Validate Alert Authority's procedures are effective
Objective 3.2 – Validate broadcaster's procedures are effective

Goal 4 – Provide early warning to the public

Objective 4.1 – Validate a single message reaches the public through both channels.
Objective 4.2 – Validate a message is delivered to the public in less than two minutes

1.3 Scope

The scope of this document is limited to the testing of the identified functional requirements of the CSEPP community. This test plan documents the project's activities to be performed, the schedule of activities, assigned responsibilities, and resources required, including staff, tools, and computer facilities. The documentation of the test results will be incorporated into the final report.

Testing will occur within the limits of the following:

- 47 Code of Federal Regulation (CFR) 10
- 47 CFR 11
- IPAWS policies and procedures
- State IPAWS Plan
- Applicable waivers

1.4 Use Cases

The use of IPAWS to accomplish the goals of CSEPP was reviewed and the use cases identified below were developed. Only the first use case will be tested in this test plan.

General Alert (Single Jurisdiction, Single Message)

The general alert use case is a situation where a jurisdiction has an alert to go to the public and only needs to issue a single message. An example of this could be a local emergency management agency (EMA) issuing an alert message to boil water due to contamination.

Sub-County General Alert (Single Jurisdiction, Single Message, sub-County Area)

The general alert use case is a situation where a jurisdiction has an alert to go to a geographic sub-set of the public and only needs to issue a single message. An example of this could be a local EMA issuing an alert message to zone A to Shelter in Place.

Sub-County Multiple Alerts (Single Jurisdiction, Multiple Messages)

The multiple alert use case is a situation where a single jurisdiction must send multiple alerts to a geographic sub-set of the public. An example of this is an Immediate Response Zone (IRZ) jurisdiction that needs to send a Shelter in Place message for one zone and a relocate message to another zone.

Two Jurisdictions (Two Jurisdictions, Single Message for each Jurisdiction)

The two jurisdiction use case is a situation where two jurisdictions must send alerts to the public. An example of this is an accident where two IRZ jurisdictions are impacted and must both send alerts to the public.

Two Jurisdictions Multiple Alerts (Two Jurisdictions, Multiple Messages for each Jurisdiction)

The two jurisdictions multiple alert use case is a situation where two jurisdictions must send multiple alerts to the public. An example of this is an accident where two IRZ jurisdictions are impacted and must both send a Shelter in Place message for one zone and a relocate message to another zone.

Multiple Jurisdictions (Four Jurisdictions, Multiple Messages for each Jurisdiction)

The multiple jurisdiction use case is a situation where four jurisdictions must send multiple alerts to the public. An example of this is a regional accident where multiple

jurisdictions are impacted and must send a Shelter in Place message for one zone and a relocate message to another zone.

1.5 Functional Requirements

The following functional requirements were developed based on the use cases and capabilities of IPAWS.

Req. 1. A set of predefined messages shall be validated for content and format. This will include:

- Each predefined message passes through IPAWS-OPEN to EAS.
- Each predefined message passes through IPAWS-OPEN to CMAS.
- Each predefined message is disseminated by EAS providers.
- Each predefined message is disseminated by CMAS providers.
- Each predefined message is displayed correctly by EAS devices.
- Each predefined message is displayed correctly by CMAS devices.

Req. 2. A validated alert message is displayed to the public using EAS.

Req. 3. A validated alert message is displayed to the public using WEA.

Req. 4. An alert message shall be presented to the public in less than one minute from the time the Alerting Authority sends a valid message.

Req. 5. The system shall be capable of sending an alert to an area smaller than a full county, such as a CSEPP zone using the Common Alerting Protocol (CAP) element <area>.

2 General Testing Methodology

This test plan is designed to test the requirements as developed and documented herein. These requirements are not a complete list of all functions and requirements for IPAWS; rather, they are a basic set of requirements for CSEPP.

As part of the development process, the technical working group developed a set of use cases that covers the basic functional requirements of a CSEPP user. Each use case was further refined into a respective set of requirements. Based on these requirements, this test plan was developed.

These requirements are used to develop tests for that requirement. Each test associated with a requirement is described, along with the test procedure. The basic format of each requirement is as follows:

- Test Title — Depicts the title or name for reference
- Test Description — Provides a brief overview of the test to include the requirements being tested, and the environment in which the test is performed
- Test Procedures — Lists the test steps to be followed by the tester
- Expected Results — Describes what is expected to happen
- Pass/Fail — Will be used during the actual test to record Pass or Fail
- Results — Will be used during the actual test to document the results of the test

While each requirement has a set of test steps associated with it, there is considerable duplication among the requirements. Consequently, a single test may be used to test more than one requirement at a time. This will reduce the time needed to complete the testing.

For the purposes of this test in the live environment, not all requirements will be tested.

2.1 Testing Process

There will be three phase of activities to perform this test.

- Pre-Testing
- Testing
- Post Testing

2.1.1 Pre-Testing

Prior to testing several steps must be performed.

2.1.1.1 WEA Data Collection

To properly develop WEA messages and target locations for those messages, an understanding of the wireless carrier's system is important. This information will allow the County to develop geographic areas to properly target the impacted public.

A letter and survey document was developed and sent to providers in the area. That data collection is continuing and will be used to determine the alert location in the next test plan version.

2.1.1.2 Test Plan Development

This document is the initial draft of the final test plan. As data is gathered and remaining steps performed, the test plan will be updated.

2.1.1.3 Waiver Request

Madison County will prepare a waiver request to perform the testing. The requirements of the waiver will be incorporated into the final test plan.

2.1.1.4 Public Education

A communication plan will be developed to notify the public about WEA and EAS and what to expect during the test. Since the test will be conducted in the time frame of a scheduled annual exercise, most people will have knowledge of the exercise. Communicating the WEA and EAS component will be included in these exercise communications.

2.1.1.5 Final Planning Meeting

At least two weeks prior to the test, a final planning meeting will be conducted with all participants. This meeting will encompass review of the plan and final changes. Subsequently, the final plan is published and sent to all participants.

2.1.2 Testing

On the test day, the testing staff will deploy to their assigned areas approximately 30 minutes prior to the test window, during which the tests will be conducted. The test window is designed to allow the coordination of the testers, as well as to aid in public education. The test window will be on December 18, 2013, from 11:00 AM to 3:00 PM local time, with the actual test planned for approximately 12:45 PM. This date and time will correspond with Madison County's siren test. An alternate date of December 19, 2013, at the same time will be used if needed.

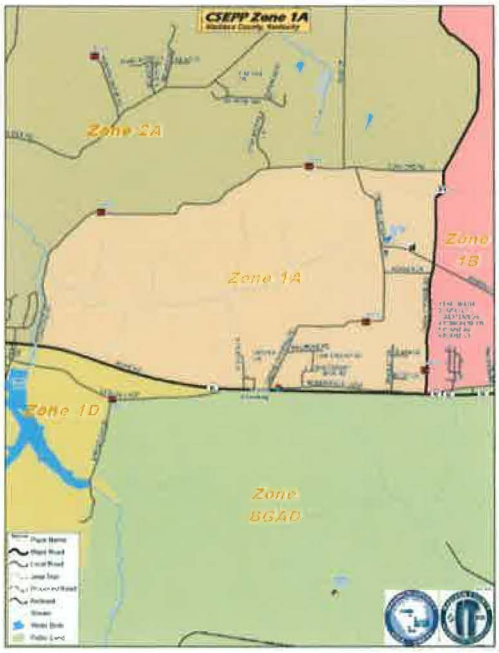
During the test window, the test scripts will be followed at the discretion of the Madison County EOC staff to ensure the test can be performed without interfering with any ongoing situations.

The test will consist of two IPAWS messages:

- Message 1 – Generate a message to IPAWS using the event type of LAE – Local Area Emergency to send the message to IPAWS-OPEN with the distribution routes of WEA and EAS.

- Message 2 – Generate a message to IPAWS using the event type of CEM – Civil Emergency Message to send the message to IPAWS-OPEN with the distribution route of WEA.

Each test message will be sent to a zone within the county. The County has selected zone 1A as the test area. The actual area will be selected after wireless provider data is completed.



2.1.3 Post Testing

Following the test, the data from the testers and system logs from IPAWS-OPEN and wireless providers will be collected. This is expected to take about two weeks to complete.

After the data is collected, it will be analyzed and a draft report will be developed. This is expected to take an additional three weeks. The draft report will be reviewed by participants. Edits and comments will be incorporated into the final report.

2.2 Testing Resources

Tester – A tester is a person identified as the person to perform the test on the equipment and systems involved. The tester should be a person that would normally perform the functions and be very knowledgeable in the test plan and technologies involved. The tester should follow the testing plan and notify the observer of all actions, to include changes to the test procedures, if needed.

Test Observer – A test observer is a person identified as the person collecting data during the testing process. The observer should be very knowledgeable in the test plan and technologies involved. The observer should not participate in the activities of the test, but should observe and report activities, to include variations from the testing procedures, if needed.

Technical Experts – The test will require various technical experts, who will primarily be from FEMA, with expertise on the infrastructure of IPAWS and with access to various test equipment for this test. There may also be a need for expert support from the IPAWS encoder vendors, local dissemination channels, and someone familiar with local emergency management plans and operations.

Equipment – The test will require the following equipment:

- Test telephones and devices
- IPAWS message initiating devices
- Conference bridge
- Speakerphone at EOC, IPAWS, and any wireless carriers
- Copy of this test plan
- Assorted office supplies

2.3 Testing Teams

For the duration of the testing, a person who is an observer shall not act as a tester for any tests. The following personnel are assigned as observers:

Observer's Name	Primary Location
	Madison County EOC
	Zone 1A – Site 1
	Zone 1A – Site 2
	Zone 1A – Site 3
	Zone 1A – Site 4
	Zone 2A – Site 5
	Zone 2A – Site 6
	Zone 1B - Site 7
	Zone 1B – Site 8
	Zone 1B – Site 9
	Zone 1B – Site 10
	Zone 2B – Site 11
	Zone 2B – Site 12
	Zone 1C – Site 13
	Zone 1D – Site 14
	Zone 3C – Site 15
	IPAWS Office

Testing Locations

Site #	Zone	Name/Intersection	Address	Recommend Location/Comments
1	1A	Animal Crackers	2383 Irvine Rd.	
2	1A	Dollar General	2975 Irvine Rd.	
3	1A	Richmond Raceway	328 Greens Crossing Rd.	
4	1A	52 Concord	Electrical substation right side of Concord	First right on Concord before 111
5	2A	Small Wonders Child Care	1013 Ival James Blvd.	
6	2A	RFD Station 2	421 Professional Dr.	
7	1B	Madison County Fairgrounds	3237 Old Kentucky Hwy 52	
8	1B	Moberly Tower Site	93 Forest Ln.	
9	1B	Siren 1B3	1802 Forest Ln.	
10	1B	Siren 1B2	269 College Hill Rd.	
11	2B	Siren 2B2	950 College Hill Rd.	
12	2B	Waco Church of the Nazarene	3921 Irvine Rd.	
13	1C	Speedwell Rd	2014 Lucille Dr.	Drive to end of cul de sac
14	1D	Enterprise Tower Site	2249 Enterprise Dr.	
15	3C	Wal-Mart-Berea	120 Jill Dr.	

The following personnel are assigned as testers:

Tester's Name	Primary Location
	Madison County EOC

2.4 Schedule

The Test Plan schedule is designed to allow flexibility in the testing as needed. The final report will document the actual dates of the testing phases.

The Deployment Team will coordinate plan activities with the Project Manager.

Activity	Planned Dates	Actual Dates
IPAWS Data Collection	May to September 2013	
Apply for a Waiver	September to November 2013	
Planning Meeting	TBD	
Public Outreach	November to December 2013	
Testing	December 18, 2013 11:00 AM to 3:00 PM	
Back Up Test date	December 19, 2013 11:00 AM to 3:00 PM	
Data Compilation	December 2013 and January 2014	
Test Report	February 2014	

3 Acronyms and Glossary

TO BE ADDED

4 Test Scripts

The following pages contain test scripts for conducting IPAWS testing.

The remainder of this page is intentionally blank.

Test - 1. IPAWS Exercise Test (EAS and WEA)

Test Description:

This test will be conducted in the test environment. This script will test requirement 1, 2, 3, 4, and 5. The test will validate the delivery of a message to the distribution systems.

Test Procedure:

1. Verify that all devices are on the production environment.
2. Verify time on each device is synchronized.
3. Create an alert message using test message template #1 and transmit.
4. Validate that the message was processed and displayed on the test devices for each distribution medium.
5. Field sites shall capture (picture, video or screen shot) each message on each distribution medium.
6. Field sites shall capture log files from each device in the process (time received at IPAWS-OPEN, sent to distribution device, and time received on public display, etc.).

Expected Results:

Test message will be received and logged at the local broadcast stations and field user phones for WEA.

Pass/Fail:

Results:

Test - 2. IPAWS Exercise Test (WEA)

Test Description:

This test will be conducted in the test environment. This script will test requirement 1, 2, 3, 4, and 5. The test will validate the delivery of a message to the distribution systems.

Test Procedure:

1. Verify that all devices are on the production environment.
2. Verify time on each device is synchronized.
3. Create an alert message using test message template #2 and transmit.
4. Validate that the message was processed and displayed on the WEA test devices.
5. Field sites shall capture (picture, video or screen shot) each message.
6. Field sites shall capture log files from each device in the process (time received at IPAWS-OPEN, sent to distribution device, and time received on public display, etc.).

Expected Results:

Test message will be received and logged at the field user phones for WEA.

Pass/Fail:

Results:

Appendix A – Contact Information

Name	Agency and Role	Phone	E-mail

Appendix B – Test Message Templates

Test messages are being developed and focus grouped by the CSEPP Public Affairs group. The final messages may be different.

Test Message 1
Event Code (required) – ADR, AVA, AVW, CAE, CDW, CEM, EQW, EVI, FRW, HMW, LAE, LEW, NUW, RHW, RMT, RWT, SPW, TOE, VOW
LAE – Local Area Emergency
County Code(s) (required)– 6-digit extended FIPS code(s) not to exceed 31 codes
021151
Sent Time (required) – Must be within +/- 5 minutes of current time
Generated by the system
Expires Time (required) – Must not exceed Sent Time by 99.5 hours
15 minutes
Sender Name (required) – Human-readable name of agency or authority issuing alert
Madison County EOC - MADEOC
Headline (required)
This is a test of the IPAWS alerting system
Description (required) – Human readable description of the hazard or event
This is a test of the IPAWS alert system there is NO emergency.
Instruction (optional) – Human readable instruction to targeted recipients
Had this been an actual emergency you would have been told where to tune for further information. MADEOC
90-Char Text (optional) – 90 characters or less including agency ID, no phone numbers, no URLs
This is a test of the IPAWS Alert system this is only a test MADEOC

Test Message 2
Event Code (required) – ADR, AVA, AVW, CAE, CDW, CEM, EQW, EVI, FRW, HMW, LAE, LEW, NUW, RHW, RMT, RWT, SPW, TOE, VOW
CEM – Civil Emergency Message
County Code(s) (required)– 6-digit extended FIPS code(s) not to exceed 31 codes
021151
Sent Time (required) – Must be within +/- 5 minutes of current time
Generated by the System
Expires Time (required) – Must not exceed Sent Time by 99.5 hours
15 Minutes
Sender Name (required) – Human-readable name of agency or authority issuing alert
Madison County EOC - MADEOC
90-Char Text (optional) – 90 characters or less including agency ID, no phone numbers, no URLs
This is a test of the Wireless Emergency Alert system this is only a test MADEOC

Appendix C – Field Observer Checklist

Site Assignment:

Physical location (Address or Lat/Lon):

Message 1

Carrier and Device:
Received Time:
Screenshot Filename:

Carrier and Device:
Received Time:
Screenshot Filename:

Carrier and Device:
Received Time:
Screenshot Filename:

Carrier and Device:
Received Time:
Screenshot Filename:

Message 2

Carrier and Device:
Received Time:
Screenshot Filename:

Carrier and Device:
Received Time:
Screenshot Filename:

Carrier and Device:
Received Time:
Screenshot Filename:

Carrier and Device:
Received Time:
Screenshot Filename:

Make sure a screen shot of each device is taken for each message.

Appendix D – Observer Site Locations